

Improvement in Technological Process of Needle
Wire Production

77621
SOV/133-60-2-21/25

heat treatment and deformation rates is endowed with nonuniform mechanical and structural properties; reject due to decarburization increases drastically. The effects of preliminary heat treatment and deformation on the lowest recrystallization temperature were observed by subjecting 6.0 mm diam wire of U8A-steel (0.84% C) drawn to 3.5 mm diam to (a) recrystallization annealing at 680° C for 8 hr; (b) normalizing at 900-920° C for 110 sec; (c) patenting at 900-920° C for 110 sec in furnace and 38 sec in Pb. Figure 2 illustrates different heat treatments and total deformation as they affect lowest recrystallization temperature.

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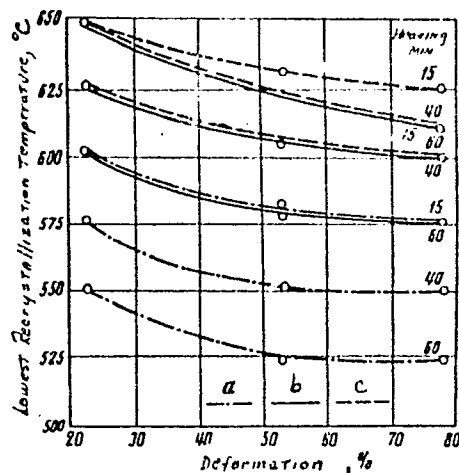


Fig. 2. Lowest recrystallization temperatures of
(a) annealed; (b) patented; and (c) normalized wire
after 15, 40, and 60 min heating.

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The following variations were tested:

Variation	I	II	III	IV	V	VI
Rates	N + 2R;	2N + R;	P + 2R;	2P + R;	HR + 2R;	HR + N + R

VII

O + 2R

(N = Normalizing; R = recrystallization; P = patenting; HR = hot rolling; O = oxidation annealing.) Variations I and III imparted the mechanical properties of wire; variations II and IV are recommended for wire with minimum 44% deformation. Furthermore, the authors found that mechanical and structural non-uniformity could be considerably decreased by simple measures, i.e., (a) applying recrystallization annealing to a batch which has been subjected to identical preceding heat treatment and deformation;

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Furthermore, the authors found that mechanical and structural nonuniformity could be considerably decreased by simple measures, i.e., (a) applying recrystallization annealing to a batch which has been subjected to identical preceding heat treatment and deformation; and (b) heating and holding at minimum temperatures (to 660 and 630° C) as well as decreasing the number of annealing treatments (to 1 or 2) by initial normalizing and patenting and by drawing with the highest possible degree of deformation. By following suggestion (b) a drastic decrease in decarburization was observed. (2) Production of divorced pearlite structure in patenting furnace: The authors studied the possibilities of further decreasing recrystallization annealing as well as holding time and temperatures by producing divorced pearlite prior to annealing. Normalized 6.0 mm diam rolled wire of U7A (0.78% C), U8A (0.82% C), and U10A (0.98% C) was reduced to 3.8 mm diam, heated to

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720, 760, 790, 820, and 850° C and either cooled in air or heated in isothermal environment at 550, 600, 650 and 700° C. Holding time varied between 75 and 240 sec and between 33 and 70 sec in isothermal environment. Holding time during heating decisively influenced the development of crystallization centers during cooling. Industrial tests corroborated the possibility of producing divorced pearlite by air cooling or in isothermal environment which allows the temperature of recrystallization annealing to decrease by 20-30° C. (3) Decarburization was further decreased by introducing about 2% benzene vapors into the controlled atmosphere (PSA-0.8). (4) In Tsentrrom-type furnaces sodium acetate is recommended as a carburizer in quantities of 50 g per ton of wire. (5) The above methods may be utilized for the improvement of other metal articles, such as ball bearing wire, bands, etc. The cooperation of N. V. Sokolov (Candidate of

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Technical Sciences) and V. G. Svalov is acknowledged.
There are 4 figures; 2 tables; and 7 Soviet references.

ASSOCIATION: Beloretsk Steel Wire and Rope Plant

Card 7/7

S/193/60/000/008/009/018
A004/A001

AUTHORS: Krasil'nikov, L. A., Rodionov, F. L.

TITLE: A Machine for Fatigue Tests of Wires at High Temperatures

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 8, pp.31-33

TEXT: The authors point out that information on the life of wires at high temperatures is still rather insufficient, although components like valve springs operate at temperatures in the range of 300-600°C. Therefore the authors developed a machine for the testing of wire fatigue at temperatures of up to 600°C, the machine being built and operated at the Beloretskiy staleprovolochno-kanatnyy zavod (Beloretsk Steel-Wire and Cable Plant). The illustration shows the schematic block diagram of the machine.

Figure:

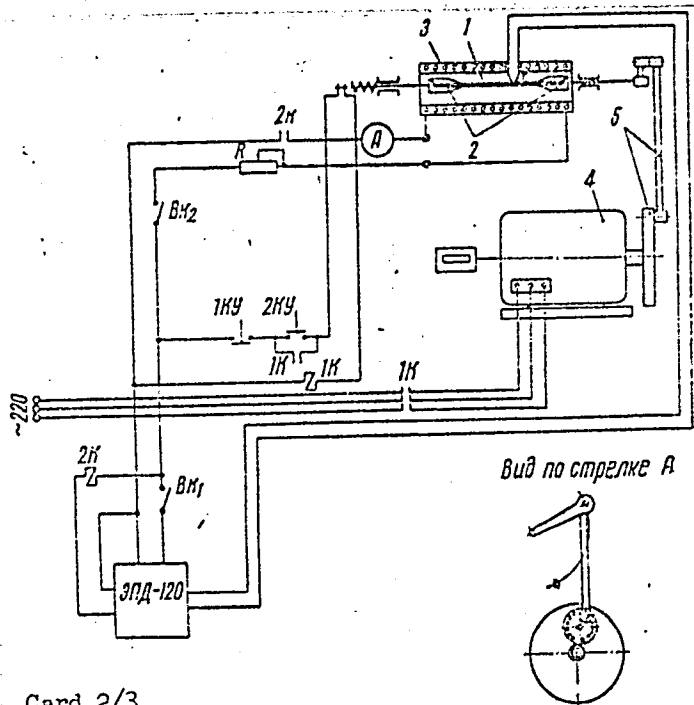
1 - specimen being tested; 2 - clamping fixtures; 3 - heating furnace; 4 - motor; 5 - lever-eccentric mechanism; ЭПД-120 (EPD-120) - electronic potentiometer.

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S/193/60/000/008/009/018
A004/A001

A Machine for Fatigue Tests of Wires at High Temperatures

The wire specimen is fastened in the clamping fixtures and is subjected to alternating rotation by a motor through a lever-eccentric mechanism which is located in a hermetically sealed metallic housing with oil. By setting the lever of the mechanism in different holes of the crank disk it is possible to control the magnitude of twist of the specimen being investigated. The angles of rotation of the specimen at any given lever position are




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S/193/60/000/008/009/018
AG04/A001

A Machine for Fatigue Tests of Wires at High Temperatures

preliminarily marked with the aid of a protractor. The load stresses are given by the angles of twist. The machine is equipped with a cylindrical furnace which makes it possible to test specimens at temperatures of up to 600°C. The location of the heating spiral within the furnace ensures a sufficiently uniform distribution of temperature over its whole length. The temperature is checked and controlled by the EPD-120 potentiometer. The testing frequency is 1,500 cycles/minute. The number of cycles is recorded by a counter. There is 1 figure.



Card 3/3

~~KRASIL'NIKOV, L.A.~~, inzh.; CHERTOUSOV, V.A., inzh.

Low-temperature tempering of reinforcement strands for
prestressed reinforced concrete constructure. Stal' 20
no. 12:1146-1149 D '60. (MIRA 13:12)

1. Beloretskiy metallurgicheskiy kombinat.
(Tempering) (Reinforcing bars)

GOLOMAZOV, V.A., inzh.; KRASIL'NIKOV, L.A., inzh.

Improving techniques of producing needle wire. Stal' 20
no.2:173-177 F '60. (MIRA 13:5)

1. Beloretskiy staleprovolochno-kanatnyy zavod.
(Wire drawing) (Annealing of metals)

187500
1.1700

27929 S/133/61/000/006/014/017
A054/A129

AUTHORS: Zubov, V. Ya., Doctor of Technical Sciences, Sokolov, N. V., Candidate of Technical Sciences, Krasil'nikov, L. A., Grachev, S. V., Engineers

TITLE: Deformation of metastable austenite and strength of steel strip

PERIODICAL: Stal', no. 6, 1961, 549-551

TEXT: As a result of extensive research new ways were found to increase the strength of steel. Based on P. P. Anosov's studies, V. D. Sadovskiy (Ref. 2), L. V. Smirnov, Ye. N. Sokolov and V. D. Sadovskiy: Proceedings of the Institute of the Physics of Metals UFAN, 1956, no. 18, 35-36) put forward the suggestion that the excellent mechanical properties of Damascus blades were due to a combination of forging and hardening. With this theory in mind and the knowledge that the strength of alloyed steels could be raised by plastic deformation of austenite in supercooled condition, a so-called "thermo-mechanical" treatment was established for 65Г (65G) and 3Х142 (E1142) type 2-mm thick spring wires. In the tests the wire was deformed (flattened) after heating until austenite formation and after cooling in tin bath from 380-400°C (Fig. 2). The strip (0.7 x 2.63 mm) processed by the new method in the laboratory was annealed at various

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S/133/61/000/006/014/017
A054/A129

Deformation of metastable austenite ...

temperatures. Next the strength limit, the quantity of residual austenite and the microstructure of the strips under hardened condition were examined. It was found that by tempering at a temperature of up to 350°C with a holding time of 5 minutes the strength limit of E1142 steel increased to 300 kg/mm². Maximum strength for 65G steel (280 kg/mm²) was obtained at a lower annealing temperature (300°C, holding time: 5 minutes). The transformation of austenite in 65G steel during annealing takes place more quickly than in E1142 steel. At 300°C and a holding time of 5 minutes the amount of residual austenite is no more than 10% in 65G steel, while at 360°C and a holding time of 1 minute nearly the entire quantity of austenite will be transformed. The microstructure of the test steels after flattening (with supercooled austenite and upon cooling at room temperature) displays elongated, dark grains with curved sliding surfaces in dense arrangement. These are evidently the products of the second stage of austenite transformation, which develops under the effect of plastic deformation on the disintegration of supercooled austenite. The tests were carried out with the cooperation of Engineer Yu. P. Surkov and Technician A. G. Lysenko. There are 5 figures and 7 references. 4 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION Beloratskiy staleprovolochnyy zavod (Beloratsk Steel-Wire Plant)
Ural'skiy politekhnicheskii institut (Ural Polytechnical Institute)

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18.8200 also 2807

24165
S/032/61/027/005/013/017
B132/B2J6

AUTHORS: Krasil'nikov, L. A. and Chertousov, V. A.

TITLE: Device for determining the relaxation tension in wire

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 5, 1961, 614-615

TEXT: The authors developed a device for investigating the relaxation tension in wire. With it, wires of a diameter of 0.7-3.0 mm, at room temperature and initial tensions of 100-250 kg/mm² may be investigated. The main parts are: clamps, loading- and measuring device (Fig. 1). The perfected clamping installation (1) and (2) warrants self-elongation of the specimen (3). The specimen is loaded by exchangeable weights (4) and (5), the latter being movable on the lever (6). The lever ratio 1:10 permits a high initial tension σ_0 for the test. The size of the weights and their ratio are selected in dependence on the diameter of the wire to be tested, the value σ_0 and the limits of the relaxation tension. The relaxation tension of any moment is formed by the position of the movable weight. The measuring device consists of the measuring rule (7) and a pointer which is fitted

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S/032/61/027/005/013/017
B132/B206

Device for determining ...

to the movable weight. The values of the scale divisions for various loads through (4) and (5) are determined by dynamometer or weights. The system which warrants constant deformation of the wire specimens, consists of a differential magnetic pickup (8), a type which is referred to in the study by A. M. Turichin (A. M. Turichin, Elektricheskiye izmereniya neelektricheskikh velichin (Electric measurement of nonelectric quantities) Gosenergoizdat 1959). To it belongs an amplifier with damping down oscillation (9) and a reversible motor (10). The length of the specimens changes during the relaxation of the tension, and the plate at the end of lever (6) is displaced and disturbs the equilibrium of the system. It is restored in the following way: the signal from the pickup through the amplifier (9) controls the motor which turns the spiral (11) shifting the load (5) and thus restoring the initial length of the specimen. Calibration curves were recorded for various load ranges. The pickup sensitivity excludes errors due to creep for long specimens, too. The device was experimentally tested with an indicator. The pickup sensitivity amounts to 30μ . At a ratio of 1:10, the length of the specimen is maintained with an accuracy of 3μ . For a specimen length of 500 mm, the initial deformation is maintained with an accuracy of $6 \cdot 10^{-4}\%$. The fixed maximum rate of relaxation of the wire specimen at room,

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S/032/61/027/005/013/017
B132/B206

Device for determining ...

temperature and $\sigma_0 = 150 \text{ kg/mm}^2$ amounts to $7-8 \text{ kg/mm}^2/\text{hr}$ during the first hour. Tension decreases at a rate of $20 \text{ kg/mm}^2/\text{min}$. Accurate reproducibility of the results was determined in tests with the device. Stray of the values amounts to ± 1.5 to 2% . Fig.2 shows the diagram of a 500-hr test of cold-drawn, untempered wire from steel of the type 70C2A (70CS2A). It results therefrom that draw increases the relaxation stability. There are 2 figures and 1 Soviet-bloc reference. X

ASSOCIATION: Beloretskiy metallurgicheskiy kombinat
(Beloreka Metallurgical Combine)

Card 3/5

S/115/62/000/007/004/008
E194/E455

AUTHORS: Krasil'nikov, L.A., Rodionov, F.L.

TITLE: Equipment for measuring stress relaxation in wire

PERIODICAL: Izmeritel'naya tekhnika, no.7, 1962, 17-18

TEXT: It is important to know the relaxation stability of spring materials under different loading conditions and, particularly in the case of coil springs, the stress relaxation on twisting within various temperature ranges. Accordingly, the Central Laboratory of the Beloretskiy staleprovolочно-kanatnyy zavod (Beloretsk Steel-Wire and Rope Works) has studied this characteristic of spring wires in the temperature range 100 to 600°C, with initial shear stresses up to 100 to 150 kg/mm² using an equipment designed by the author with the cooperation of V.A.Chertousov. The ends of the wire are held by clamps which can rotate. One is loaded and the other is twisted to set up an initial torque in the wire. Deflection is measured by pointer readings and torques are graphically converted to stress for different diameters of wires. When stress relaxation during the test relieves the loaded clamp, contacts apply geared motor drive to the other clamp to maintain

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Equipment for measuring ...

S/115/62/000/007/004/008
E194/E455

the loading. The test wire is surrounded by an electrically heated tube. In steel specimens, relaxation increases greatly with temperature. High initial stress is associated with high relaxation. Numerous tests have shown that the rate of relaxation is greatest at the start. For a wire of metastable structure (highly hardened and not tempered), at 500°C, the maximum rate of relaxation at a stress of 100 kg/mm² was 1.78 kg/mm² per sec for the first twenty seconds. The r.m.s. error on a wire of 1.5 mm diameter at temperatures of 200 to 300°C and stress of 40 to 50 kg/mm² was about 1.5%. There are 3 figures.

Card 2/2

SOKOLOV, N.V., kand.tekhn.nauk; SHCHETKIN, L.I.; GOKHBERG, Ya.A., inzh.;
KRASIL'NIKOV, L.A., inzh.; DMITRIYEV, V.M., inzh.

Production of rope wire with a heavy zinc coating. Stal' 22
no.4:368-370 Ap '62. (MIRA 15:5)

1. Beloretskiy staleprovolochno-kanatnyy zavod.
(Wire drawing) (Zinc plating)

KRASIL'NIKOV, L.A.; SOKOLOVA, I.V.

Intensifying tensile tests of a wire. Zav.lab. 28 no.7:853-855
'62 (MIRA 15:6)

1. Beloretskiy metallurgicheskiy kombinat.
(Wire--Testing)

KRASIL'NIKOV, Lev Aleksandrovich; VLADIMIROV, Yu.V., red.izd-va;
ISLET'YEVA, P.G., tekhn. red.

[Wire drawing worker; manual for on the job improvement of
qualifications]Volochnil'shchik provoloki; posobie dlia povy-
sheniia kvalifikatsii rabochikh na proizvodstve. Moskva,
Metallurgizdat, 1962. 157 p. (MIRA 16:2)
(Wire drawing)

L 10601-63

SWP(q)/SWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: APJ001052

S/0148/63/000/004/0109/0114

55
53

AUTHOR: Zubov, V. Ya.; Krasil'nikov, L. A.

TITLE: Relaxation stability of 1Kh18N9T⁶ steel wire.

SOURCE: IVUZ. Chernaya metallurgiya, no. 4, 1963, 109-114

TOPIC TAGS: relaxation stability of steel wire, C, Mn, Si, S, P, Cr, Ni, Ti.
1Kh18N9T steel, USA steel

ABSTRACT: This article is a continuation of a study which the authors conducted previously (Zubov, V. Ya., Krasil'nikov, L. A., Klekovkin, A. A., "Materials of conference of metallurgists and heating engineers", Metallurgizdat, 1960, page 88). Authors made additional studies on the problem of influence of cold-deformation and tempering on the relaxation-stability of 1Kh18N9T steel wire. Fatigue properties were also studied. Chemical composition of the wire was: C, Mn, Si, S, P, Cr, Ni, Ti. The wire's mechanical properties were determined by standard methods. Plastic limit was determined by strength measurements, taking into account the shear stress coefficient and using the equipment as described by K. G. Galimkhanov (Zavodskaya laboratoriya, 1957, No. 12). Authors conclude that elasticity of cold-drawn 1Kh18N9T steel wire tempered below 250-300C is somewhat lower

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L 10601-63

ACCESSION NR: AP3001052

in comparison with wire drawn from USA steel. Elasticity is higher at elevated temperatures. Orig. art. has: 6 figures and 2 tables. 2

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: 08May62

DATE ACQD: 11Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 008

OTHER: 000

elm/df
Card 2/2

L 6897-65 EMP(M)/EMP(G)/EMP(B)/EMP(T) AFRTS/SSD/ASD(F)/APWL HWJ/JD
 8/0137/64/000/006/1060/1061
 ACCESSION NR: AB404226

SOURCE: Ref. zh. Metallurgiya, Abs. 61352

AUTHOR: Krasil'nikov, L. A.

AUTHOR: KRASIK, NIKOLAI
TITLE: Influence of certain technological factors on the relaxation of stresses in steel wire

in steel wire
CITED SOURCE: Sb. Relaksats. yavleniya v met. i splavakh. M., Metallurgizdat,
1963, 320-325

TOPIC TAGS: steel, steel wire, stress, stress relaxation 18

TOPIC TAGS: Steel, Steel Wire

TRANSLATION: Investigates the relaxation of stresses during torsion of wire of high strength made from carbon steel of brands 32, 50, 60, 70, U8A, U9A, 65M and 70B2Kh at various temperatures and initial stresses. Studies also the influence of impurities (C, Mn, Si), tempering temperature (200-500°), magnitude of total (to 90%) and partial (to 15-20%) pressing on the nature of stress relaxation. For every brand of steel in process of manufacture optimum conditions of patenting were used. Stress relaxation in wire was measured on a device whose operation is based on

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ACCESSION NR: AB4044226

the compensational principle. There are given the schematic diagram and a description of the installation. Stress relaxation under conditions of torsion was determined at 15, 25, 150, 250, 350 and 450°. The duration of the tests at 15-25° was 200 hr; at the other temperatures it was 15 hours. Relaxation stability of the wire was estimated by the ratio of relaxation stress τ_r to initial stress τ_0 . At 15-25° and 150° highly work hardened (80%) wire at low initial stresses ($\tau_0 = 40 \text{ kg/mm}^2$) has higher relaxation stability, which increases with increasing carbon content. At high test temperatures ($> 150^\circ$) an increase in the C content has a negative influence on the relaxation of the wire. For steels of brands 60, 65G, and 70S2KhA, Mn and Si increase σ_r and σ_0 after tempering and also the relaxation stability of the wire in tempered and untempered states. With an increase in test temperature, the positive influence of these elements is intensified. Cr also exerts an additional improving influence on the properties of wire made from steel 70S2KhA. For every test temperature there is an individual dependence of relaxation stability on the magnitude of preliminary deformation during drawing of the wire. For the manufacture of springs, during the use of which at temperatures to 150° it is impossible to allow significant stress relaxation, it is recommended to use wire made of steel having a C content of

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ACCESSION NR: AR4044226

not less than 0.7-0.8%. During the production of such wire one should use high degrees of total deformation, favorably reflecting on the relaxation stability. It is also expedient to use steel with an increased Mn and Si content. Bibliography: 6 references.

SUB CODE: RM, AS

ENCL: 00

Card 3/3

KRASIL'NIKOV, L.A.; NADEZHDINA, A.A.

Microstresses in cold-drawn steel wire. Izv. vys. ucheb. zav.;
chern. met. 6 no.8:151-154 '63. (MIRA 16:11)

1. Magnitogorskiy gorno-metallurgicheskiy institut.

SOKOLOV, N.V., kand.tekhn.nauk; KRASIL'NIKOV, L.A., inzh.; SHCHETKIN, L.I.;
SILANT'YEV, L.A.

Effect of surface treatment and the conditions of zinc plating on
the quality of steel wire coatings. Stal' 23 no.9:856-857 S
'63. (MIRA 16:10)

1. Beloretskiy staleprovolochno-kanatnyy zavod.

KRASIL'NIKOV, L.A.; CHERTOUSOV, V.A.

Oscillographic method for determining the α -phase in austenitic steel. Zav.lab. 29 no.12:1463-1464 '63. (MIRA 17:1)

1. Beloretskiy metallurgicheskiy kombinat.

KRASIL'NIKOV, L.A.; SOKOLOV, N.V.; LYSENKO, A.G.

Determining stress relaxation in wire rope strands used for
prestressing of reinforcements. Sbor. trud. TSNIICHM no.32:
192-195 '63. (MIRA 16:12)

NAGDASEVA, I.P.; BUNKOV, G.G.; KRASIL'NIKOV, L.A.

Mechanical characteristics of some designs of metallic tire cord.
Kauch. i rez. 23 no. 3:16-19 Mr '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i
Beloretskiy metallurgicheskiy kombinat.

KRASIL'NIKOV, L.A., dotsent; SOKOLOV, N.V., kand.tekhn.nauk

Effect of curling during the drawing process on the mechanical properties of wire. Stal' 24 no.2:185-186 F '64. (MIRA 17:9)

1. Beloretskiy metallurgicheskiy kombinat.

KRASIL'NIKOV, L.A., dotsent; LYSENKO, A.G., inzh.

Effect of direct electric heating on the steel wire patening
process. Stal' 24 no.5:468-471 My '64. (MIRA 17:12)

1. Beloretskiy staleprovolochno-karatnyy zavod.

SOKOLOV, N.V., kand. tekhn. nauk; BURKOV, G.G., inzh.; KRASIL'NIKOV,
L.A., inzh.; GOLOMAZOV, V.A., inzh.; BOBYLEVA, S.F.; LYSKOV,
I.K.; Prinsipali uchastiye; BRFZHNEV, I.S.; SHCHETKIN, L.I.;
YERMATSKAYA, A.M.; ANDRIANOVA, A.L.; SILANT'YEV, L.A.;
NADEZHDINA, A.A.; LAKHMOSTOVA, F.S.; DEMENT'YEV, V.F.

Improvement of the processes of manufacturing high-strength,
steel brass plated wire. Stal' 24 no.8:756-759 Ag '64.
(MIRA 17:9)

1. Beloretskiy staleprovolochno-kanatnyy zavod.

ZUBOV, V.Ya.; KRASIL'NIKOV, L.A.; KRASAVINA, T.N.

Axial stresses in steel wire and their relaxation during tempering.
Izv. vys. ucheb. zav.; chern. met. 8 no.2:125-130 '65.

(MIRA 18:2)

1. Ural'skiy politekhnicheskiy institut.

I 1350-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) IJP(c) MJW/JD/
HW/JG

ACCESSION NR: AP5021932

UR/0126/65/020/002/0210/0215/
538.653

AUTHOR: Polovov, V. M.; Krasil'nikov, L. A.

TITLE: Effect of elastic stresses on the magnetic properties of a highly coercive alloy of the Fe-Ni-Cr system

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 2, 1965, 210-215

TOPIC TAGS: magnetic property, elastic stress, magnetic coercive force, hysteresis, magnetization, magnetic anisotropy, ferrite, magnetic domain/ KhMN alloy

ABSTRACT: The magnetic behavior of partially austenitic alloys of the Fe-Ni-Cr system depends markedly on the dimensions of ferrite-phase segregations and their packing density in the nonmagnetic matrix. It is assumed that after Fe-Ni-Cr alloys are treated to acquire a high coercive force their magnetic phase contains mono-domain particles. But there is as yet no proof of this assumption. Therefore, to fill this gap, and also since it is known that effect of external elastic stresses on the hysteresis of a ferromagnetic depends largely on its magnetic structure, the authors investigated, by means of the oscillographic method of

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I. 1350-66

ACCESSION NR: AP5021932

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direct observation of the hysteresis loop, the variation in the basic magnetic characteristics of partially austenitic KhNM alloy specimens that were either cold-deformed or tempered at 120-550°C for 10⁴ hr or both. The measurements were performed in a field of 1400 oersted intensity. Findings: elastic stresses affect the magnetic properties of the highly coercive KhNM alloy; in the process of the tempering at 345-445°C of cold-deformed KhNM alloy the multi-domain structure of the ferritic particles changes into a mono-domain structure. These findings are explained on the basis of the theory that elastic deformation of lattice changes the magnetic texture of the material and the total magnetic anisotropy of ferrite-phase particles. Orig. art. has: 4 figures.

ASSOCIATION: Beloretzkiy provolochno-kanatnyy zavod (Beloretzsk Wire-Cable Plant)

SUBMITTED: 08Apr64

ENCL: 00

SUB CODE: EM, MM 44.55

NO REF SOV: 007

OTHER: 004

Card
2/2

KRASIL'NIKOV, I.A.; CHERTOUSOV, V.A.; SILANT'YEV, S.A.

Use of the BU-3 ballistic stand in wire testing. Zav.lab. 31
no.10:1273-1274 '65. (MIRA 19:1)

1. Beloratskiy metallurgicheskiy kombinat.

I. 06273-67

ACC NR: AP6025074

SOURCE CODE: UR/0115/66/000/006/0037/0038

AUTHOR: Polovov, V. M.; Krasil'nikov, L. A.

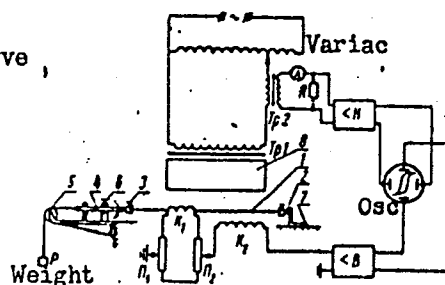
ORG: none

TITLE: Oscillographic outfit for measuring magnetoelastic effects

SOURCE: Izmeritel'naya tekhnika, no. 6, 1966, 37-38

TOPIC TAGS: magnetoelastic effect, magnetization curve, hysteresis loop

ABSTRACT: The oscillographic outfit for measuring magnetoelastic effects (see figure) comprises: specimen 1 fixed in nonmagnetic-material clamps 2 and 3; bar 4 can be turned by screw 6 to apply a torsional deformation to the specimen; tension leads are applied by a weighted wire passed over sheave 5; short-circuited turn 8 magnetizes the specimen. Measuring K_1 and compensating K_2 coils are placed in a circular magnetizing field. As $B = \mu_0 H = \mu_0 J$ and channel-B amplifier contains an integrating link, the vertical deviation of the oscillograph beam represents J ; the hysteresis loop appears on the screen. The coercive force, remanence, and loop shape can be observed during the application of elastic stresses to the specimen. Orig. art. has: 1 figure and 6 formulas.



SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003

Card 1/1 *eqk*

UDC: 621.317.351:621.317.4

KRASIL'NIKOV, L.G.; RISHZON-RYSS, Yu.I.

Comparative study of the mechanical and electrical recording
of human gastric peristalsis. Nov. med. tekhn. no.1:66-71 '62.
(MIRA 19:1)

KRASIL'NIKOV L.G.

SHILOV, P.I., professor; KRASIL'NIKOV, L.G. (Leningrad)

Diagnostic disnificance of the rate of leucopedesis in diseases of
the stomach. Klin.med. 35 no.6:55-58 Ja '57. (MLRA 10:8)

1. Iz kafedry terapii dlya usovershenstvovaniya vrachey (i.o.nachal'-
nika - prof. P.I.Shilov) Voenno-meditsinskoy ordena Lenina akademii
imeni S.M.Kirova

(STOMACH, dis.

diag. significance of leukopedesis)

(LEUCOCYTES, in various dis.

leucopedesis, diag. value in gastric dis.)

KRASIL'NIKOV, L.G.

Clinical significance of electrogastrography. Sov.med. 24 no. 3:
107-114, Mar '60. (MIRA 141P)

1. Iz Glavnogo voyennogo gospi'talya imeni akad. N.N.Gurdenko (nach.-
general-mayor meditsinskoy sluzhby L.I.Lyalin).
(STOMACH—EXPLORATION)

KRASIL'NIKOV, I. G.

Recent data on the utilization of the electrogastrograph (EGS. 2 and 3)
in clinic. Nov. med. tekhn. no.1:76-82 '61. (MIRA 14:12)

1. Glavnyy voyennyi gospi'tal' imeni N. N. Burdenko.

(ELECTROGASTROGRAPHY)

BORISEVICH, N.V.; KRASIL'NIKOV, L.K., nauchnyy red.; MATIS, T.I.,
red. izd-va; ~~TYERUSALIMSKAYA~~, Ye.S., tekhn. red.

[Industry's requirements as to the quality of mineral raw materials; handbook for geologists] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. No.26 [Nickel] Nikel'. Nauch. red. Krasil'nikov. Izd.2., perer. 1961. 81 p. (MIRA 15:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

(Nickel)

2/072/60/000/03/021/023
2003/0008

Сыктывкар, 8. X.

3rd All-Union Conference on the Vicious Circle

TITLE:
PERIODICAL:
ABSTRACT:

[illegible][illegible]

Case 3/8

[illegible]

Case 4/0

card 5/0

KRASIL'NIKOV, L. V.

Dynamos

Overvoltage in extinguishing generator's fields Elek. sta. 23 no. 3:28-29 Mr '52.

Inzh

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified

1. KRASIL'NIKOV, L.V.
2. USSR (600)
4. Dynamos
7. Using solid rectifiers for extinguishing the field of synchronous generators at rural hydroelectric power stations, Mekh. i elek.sel'khoz. no. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KRASIL'NIKOV, L. V.

Electrical Engineering Abstracts
May 1954
Machines.

1877. Choice of a non-linear resistance for improving the stability of operation of the exciter of a synchronous generator. (L. V. KRASIL'NIKOV. *Elektr. Stantsii*, 1953, No. 11, 26-9. In Russian.)

The most favoured method of improving the stability of operation of exciters is to produce a more curved exciter characteristic by introducing a non-linear resistance into this circuit (in a practical case referred to, an incandescent lamp was connected in parallel with the shunt rheostat). A criterion of the suitability of the non-linear resistance chosen is the stability coefficient which should not be < 1.17 over the whole range of the external characteristic. The reliability of operation and the control of synchronous alternators with exciter and subexciter is improved by adopting self-excitation. This is in most cases obtained by increasing the curvature of the V_f characteristic of the exciter field-circuit. B. F. KRAUS

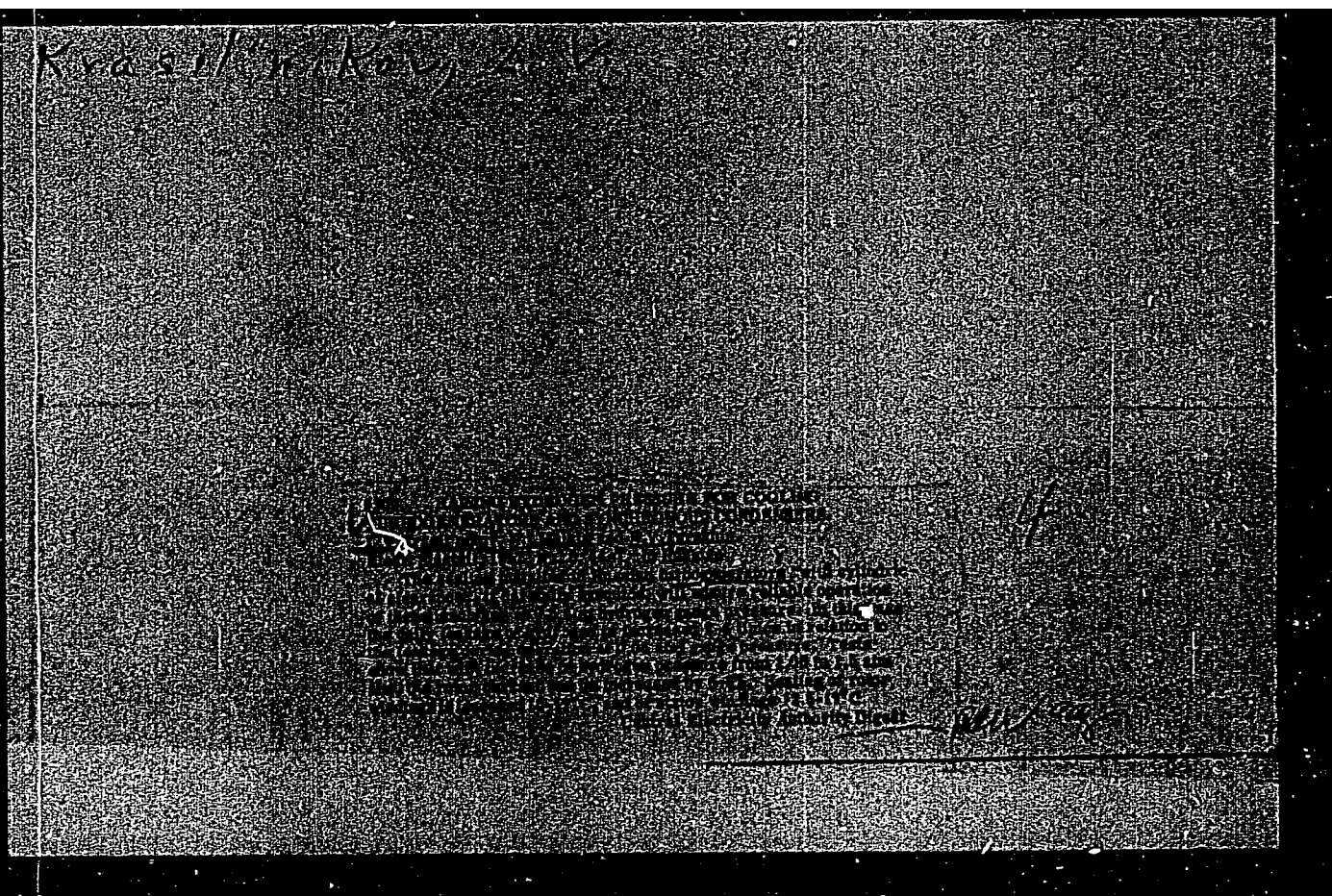
1. KRASL'NIKOV, L. V. Eng.
2. USSR (600)
4. Dynamics
7. Operation of exciters of synchronous generators according to a self-excitation scheme.
Elek. sta. 23 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

KRASIL'NIKOV, L.V.

AID P 2526

Subject : USSR/Electricity
Card 1/1 Pub. 26 - 10/32
Author : Krasil'nikov, L. V., Eng.
Title : ~~Two-phase reactance~~ starting of synchronous condensers
Periodical : Elek sta, 6, 31-34, Je 1955
Abstract : The possibility of starting synchronous condensers
(37,000 kva and 75,000 kva) with an out-of-service
reactor in the third phase is discussed. The
calculation of currents and voltages is given.
Institution : None
Submitted : No date



KRASIL'NIKOV, L.V., inzhener.

Review of G.L. Vul'man's book "Operational tests of generators
in electric power stations." Elektr. sta. 28 no.5:95-96 My '57.
(Electric generators) (Vul'man, G.L.) (MLRA 10:6)

VUL'MAN, Georgiy L'vovich; KRASIL'NIKOV, L.V., red.; MATVEYEV, G.I.,
tekh.red.

[Operation of generators at electric power plants] Eksploa-
tatsiia generatorov na elektrostantsiakh. Moskva, Gos.energ.
izd-vo, 1959. 223 p. (MIRA 12:10)
(Electric power plants--Equipment and supplies)

VUL'MAN, Georgiy L'vovich; KRASIL'NIKOV, L.V., red.; LARIONOV,
G.Ye., tekhn. red.

[Operation of generators in electric power plants] Eks-
pluatatsiia generatorov na elektrostantsiakh. Izd.2. Mo-
skva, Gosenergoizdat, 1963. 343 p. (MIRA 16:5)
(Electric generators) (Turbogenerators)

KRASIL'NIKOV, L.V., inzh.; MIKHENKO, A.P., inzh.

New developments in the field of automatic voltage regulation.
Elek. sta. 34 no.9:26-30 S '63. (MIRA 16:10)

KRASIL'NIKOV, L.V., inzh.; FILIPPOVICH, E.M., inzh.

Contactless multiple-point temperature signaling system. Elek.
sta. 36 no.1:80-82 Ja '65. (MIRA 18:3)

KRASIL'NIKOV, M.A., linzh.

Experience in operating rural, low-voltage power transmission lines.
Energetik 12 no.1:23-24 Ja '64. (MIRA 17:3)

KRASIL'NIKOV, M.I.; KUS'MIN, M.T. (Orekhovo-Zuyevo)

Health measures in Orekhovo-Zuyevo. Sov. zdrav. 22 no.7:14-18
'63 (MIRA 16:12)

1. Iz Doma sanitarnogo prosveshcheniya, Orekhovo-Zuyevo.

54700

31670
S/631/60/000/001/007/014
B117/B147

AUTHORS: Ivanovskiy, L. Ye., Krasil'nikov, M. T.

TITLE: Electrode processes and effect of oxygen in electrolytic precipitation of niobium from potassium fluoniobate

SOURCE: Elektrokimiya rasplavlennykh solevykh i tverdykh elektrolitov, no. 1, 1960, 49-54

TEXT: The authors studied processes on electrodes and the role of oxygen in the precipitation of niobium from potassium fluoniobate, they examined the cathodic and anodic polarizations and analysed the cathode deposits obtained under various conditions. Chemically pure sodium chloride and potassium fluoniobate separated from aqueous solutions and dried in vacuum drying chambers at 150 - 170°C were used as initial salts. Polarization was measured with a graphite vessel, 5 - 6 cm in diameter, serving as anode, a standard electrode, a cathode, and an additional anode of spectroscopically pure carbon. A loop oscilloscope was used to measure the polarization of a molybdenum cathode in sodium chloride melt with 5,

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Electrode processes and effect of oxygen ... B117/B147

10, 20, and 30% by weight of potassium fluoniobate at $850 \pm 15^\circ\text{C}$ with a current density ranging from 10^{-3} to 6 a/cm^2 at the moment when the polarizing current was switched off. With increasing current density several cathodic processes took place. At low current densities ($0.3 - 0.4 \text{ a/cm}^2$) niobium is reduced to the lowest valences. At higher current densities ($0.6 - 0.8 \text{ a/cm}^2$), first metallic niobium, then alkaline metal are separated. The behavior of oxygen in the bath was studied in the anodic polarization of a graphite anode in pure sodium chloride, and also in a melt containing 10% by weight of potassium fluoniobate. The polarization curve showed two sections: one apparently corresponded to the process of ionic charge exchange, the other one to the discharge of oxygen with formation of carbon dioxide. The cathodic products obtained under different conditions were analyzed in an open bath of sodium chloride with a potassium fluoniobate content of up to 15% by weight at $850 \pm 15^\circ\text{C}$. A graphite vessel was used as anode and a molybdenum rod as cathode. When nondehydrated (air-dried) salts were used, a metal containing oxide impurities might be deposited on the cathode. In most cases, the cathode

Card 2/3

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B117/B147

Electrode processes and effect of oxygen ...

deposit consisted of lowest niobium oxides (NbO_2 , NbO) or a mixture of them. The current yield generally varied between 40 and 50%. If metal was deposited besides oxides, the current yield was reduced to 20-25%. When carefully dehydrated salts (vacuum drying chamber) were used, the cathode deposit was a largely pure metal and the current yields were comparatively high. The behavior of oxygen varied under different conditions: In the case of insignificant hydrolysis, ion groups form which mainly discharge on the anode. As hydrolysis proceeds, the discharge of oxygen-containing ions takes place both on the cathode and anode. There are 3 figures and 20 references: 13 Soviet and 7 non-Soviet. The two references to English-language publications read as follows: M. A. Steinberg, S. S. Carlton, M. E. Sibert, E. Wainer, Journ. Electrochem. Soc., 102, 332, 1955; G. Keye, Amer. Patent no. 1283117.

Card 3/3

S/137/62/000/008/012/065
A006/A101

AUTHORS: Ivanovskiy, L. Ye., Krasil'nikov, M. T.

TITLE: Anodic processes during niobium dissolving in chloride and chloride-fluoride melts

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1962, 27, abstract 8G193
("Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR", 1961, no. 2, 79 - 83)

TEXT: In a first series of experiments the authors revealed the dependence of current efficiency in anodic Nb dissolving upon D and the composition of the bath. An equimolar mixture of K and Na chlorides was used as an electrolyte. The temperature was maintained at $700 \pm 10^\circ\text{C}$. It was established that the mean valence of Nb ions passing into the melt increased with higher D. At relatively low D_a (about 0.01 amp/cm^2) dissolving is accompanied by the formation of Nb^{2+} and Nb^{3+} ; at $D_a > 0.1 \text{ amp/cm}^2$ Nb^{4+} ions appear in the melt, and at high D Nb^{5+} ions appear. In the second series of experiments polarization of the Nb-anode was measured at $D = 10^{-3} - 5 \text{ amp/cm}^2$, various temperatures and different composi-

Card 1/2

Anodic processes during...

S/137/62/000/008/012/065
A006/A101

tion of the bath. It is shown that in chloride melts the dependence of the anode potential upon D is linear and is described by equation $\varphi = a + b \lg i$ in a wide D range. Polarization increases with higher D in chloride-fluoride melts.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

22343

S/200/61/000/004/003/005
D228/D305

18 3100

26 2521 also 1208

AUTHORS: Ivanovskiy L. Ye., Stepanov, G. K., Krasil'nikov, M. T.,
and Petenev, O. S.

TITLE: Study of the electrolytic solution of chlorine and
hydrogen chloride on inert electrodes

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya,
no. 4, 1961, 48-53

TEXT: In order to obtain alkali and alkaline earth metals by
electrolysis from their fused salts, it is necessary in most cases
to maintain an optimum range of concentration during the process.
As building up and maintenance of the necessary concentration via
porous diaphragms represent difficulties, it was proved in this
work that this can be solved by using gas electrodes especially
the chlorine electrode. This involves a rapid cathodic solution
of chlorine which prevents the depositing of the metal and this in
turn compensates for the lowering of the metal's ionic concentration.
The purpose of this work was to study the behavior of the gas elec-

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Study of the electrolytic solution...

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D228/D305

trodes namely: chlorine and hydrogen chloride cathodes from graphite (or carborundum) in electrolysis of fused alkali chlorides. The use of gas electrodes can compensate for a lowering below the optimum range of the ionic concentration of the deposited metal. Graphite anode and cathode, porous electrode, and a Pb reference electrode were immersed in an electrolyte of unimolecular quantities of fused sodium and potassium chlorides at 800°C through which chlorine or hydrogen chloride was passed for 3 - 4 hours. When the potential reached the steady value, the cathode polarization for the range of current densities from 10^{-3} to 3 amp/cm² was measured by means of an oscillograph at the moment the current was cut off. Polarization measurement was conducted on a graphite electrode and a porous electrode which was a "silite" tube through which chlorine or hydrogen chloride was passed into the electrolyte. The results are given in Fig. 2. The curves represent the dependence of cathode potentials on current density (abscissae - cathode potentials; ordinates - log current density in amp/cm²). Curve 1: In the electrolyte saturated with chlorine. (The first part of the curve, up to the current density of 10^{-2} represents the cathode polarization of

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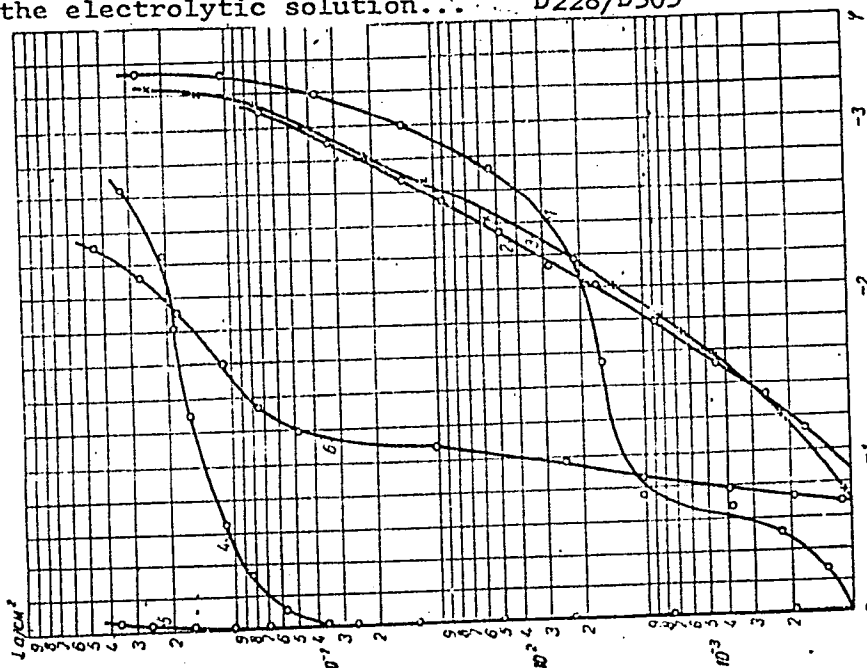
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Study of the electrolytic solution...

FIG. 2

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dissolved chlorine due to concentration changes in the vicinity of the electrode (not to the ionization of chlorine $\text{Cl} + e \rightarrow \text{Cl}^-$). Solubility of Cl_2 in fused $\text{KCl} + \text{LiCl} = 0.0038\%$ by weight obtained after 5 hours (after 1 hour it was 0.0013% which shows the speed of solubility)). Curve 2: In the electrolyte saturated with hydrogen chloride (solubility of HCl at $800^\circ\text{C} = 6,8 \cdot 10^{-4}\%$ by weight). The potential of the HCl electrode was less than that of the chlorine electrode by 0.7 v. Curve 3: In fused $\text{KCl} - \text{NaCl}$ not saturated with Cl_2 or HCl it practically concurs with Curve 2. Curves 4 and 5: On the porous "silite" electrode through which chlorine was passed. In the case of Curve 4 the chlorine used up 4 g/hr in $60 - 70 \text{ g}$ of electrolyte. Ionization of chlorine takes place without polarization over a wide range of current density. Curve 5 shows that for a higher amount of chlorine passed, higher current densities can be applied - although this results in greater loss of chlorine. The use of a porous electrode facilitates the ionization process. It can be assumed that cathodic ionization of chlorine is due to adsorption of gas on the electrode. With a fine porous electrode due to a larger electrochemically active surface and due to the pres-

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D228/D305

Study of the electrolytic solution...

sure of gas passing through the pores, the ionization rate is greater and consequently the current density range can be increased. Curve 6: On the porous electrode through which HCl was passed. (Small polarization due to diffusion and due to the evolution of hydrogen). The authors conclude that in fused alkali chlorides saturated with chlorine of hydrogen chlorine, there is high concentration polarization. When porous electrodes with gas passing through their pores are used, the process of solution of chlorine takes place without polarization and that of hydrogen chloride with small polarization and with a potential lower than that of a chlorine electrode by 1 v. The use of the chlorine electrode is indicated although the hydrogen chlorine electrode is convenient to use in the case of electrolysis of salts of low-valent metals due to its lower potential. It is found that the highly porous electrodes of graphite or carborundum with chlorine or hydrogen chloride passing through them work efficiently in the preparation and purification of metals by electrolysis of their fused salts. It was also found that the chlorine electrode can be used in high temperature electrochemical generators. There are 2 tables, 2 figures and 11

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Study of the electrolytic solution... 22343
S/200/61/000/004/003/005
D228/D305

references: 8 Soviet-bloc and 3 non-Soviet-bloc. The references
to the English-language publications read as follows: R. Piontelli
and G. Steruheim, J. Chem. Phys., 23, 1771 (1955), R. Piontelli,
G. Steruheim and M. Prancini, J. Chem. Phys., 24, 1113 (1956),
J. M. Mellor, Inorg. and theoretical Chemistry, vol. 2, 1927, p.146.

ASSOCIATION: Ural'skiy filial AN SSSR, Sverdlovsk (Ural Branch, AS
USSR, Sverdlovsk)

SUBMITTED: April 1, 1960

Card 6/6

ZHUKOV, A.I.; ONOSOV, V.N.; KRASIL'NIKOV, M.T.

Effect of temperature on the sorption and elution of hydrolyzed
thorium ions. Zhur.neorg.khim. 7 no.6:1448-1451 Je '62.
(MIRA 15:6)

1. Ural'skiy politekhnicheskii institut imeni S.M.Kirova.
(Thorium) (Isotope separation)

IVANOVSKIY, L.Ye.; ROZANOV, I.G.; KRASIL'NIKOV, M.T.; PLEKHANOV, A.F.

Electrolysis of chloride melts with anodes of NbO and NbO_2 .

Trudy Inst. elektrokhim. UFAN SSSR no.5:111-117 '64.

(MIRA 18:2)

L 38368-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AT6021369

(A)

SOURCE CODE: UR/2631/65/000/007/0069/0072

AUTHOR: Ivanovskiy, L. Ye.; Krasil'nikov, M. T.

ORG: none*

TITLE: Deposition of continuous cathodic deposits in the electrolysis of molten chloride baths containing $NbCl_2$

SOURCE: *AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy, no. 7, 1965. Elektrokhiymiya rasplavlennyykh solevykh i tverdykh elektrolitov; termodinamika i kinetika elektrodnykh protsessov (Electrochemistry of fused salts and solid electrolytes; thermodynamics and kinetics of electrode processes), 69-72

TOPIC TAGS: electrolytic deposition, niobium

ABSTRACT: Experiments on the deposition of compact niobium deposits were carried out in a closed electrolyzer under argon at 700-900°C. The electrolyte used was an equimolar mixture of potassium and sodium chlorides containing the necessary amount of niobium chloride. When the electrolyte - metal equilibrium was reached at the cathode, continuous niobium deposits 3-5 mm thick were obtained. The most compact deposits were formed at a current density of 0.1-0.2 A/cm² at 700-750°C, and the current efficiency, calculated in terms of the discharge of divalent niobium ions, was 97%. The deposits adhered better to a molybdenum base than to a niobium base because the latter was covered with an oxide film. Microhardness measurements of

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various grain sizes indicated that an ¹Nb-¹Mo alloy was formed in the grains closest to the molybdenum base. The structure of the deposit becomes coarse toward the surface, owing probably to a decrease of the actual current density with increasing size of the deposit, as well as to an increase of its purity. Raising the current density to 1 A caused the formation of a porous deposit. Continuous deposits are obtained only when the niobium ions in melt are in the divalent state; this leads to the hypothesis that a major role in the formation of the deposit is played by charge exchange. Orig. art. has: 5 figures. 2

SUB CODE: 07// SUBM DATE: 23Aug65/ ORIG REF: 003
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Card 2/2 vmb

KRASIL'NIKOV, M.V.

Butt clamping device for welding thin-walled parts. Svar.proizv.
no.9:41 S '60. (MIRA 13:8)
(Welding--Equipment and supplies)

REBEL TROV, M.V.

Pneumatic chuck with automatic red face. Machine tool

no. 2:20 F '61.

(HMA 14:2)

(Chucks)

KRASIL'NIKOV, M.V.

Vibration damper designed by lathe-operator Alekhin. Stan, 1
Instr. 35 no. 6241 Je '64 (MIRA 17:8)

KRASIL'NIKOV, N.

"The sexual process in bacteria," Izv. AN SSSR / Proceedings of the Academy of Sciences USSR, No 9, p 1329, 1932; Vestn. mikrobiol., eriden. i parazitol / Bulletin of Microbiology, Epidemiology, and parasitology, Vol. 2, p 209, 1932.

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<p>The droplets of sulfur in yeast cells. G. A. NADSON AND N. A. KRAVILNIKOV. <i>Compt. rend. acad. sci. U. R. S. S. No. A10, 248-50(1962)</i> -The oxidation of H₂S with sep. of S droplets inside yeast cells is a biochem. process. L. NASAREVICH</p>																																																			
<p>ASB-51.4 METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

KRASIL'NIKOV, N.

"The Structure, development, and race formation of Endomycetasea", DAN SSSR
[Reports of the Academy of Sciences USSR], p 313, 1952.

KRASIL'NIKOV, M.

"The formation of races in *Sporobolomyces Philippovi* n. sp.," Izv. AN SSSR, 10,
p 1469, 1933.

KRASIL'NIKOV, N.

"The structure and development of Azptobacter as related to Polymorphism," Mikrobiol.
zhurn. [Microbiological Journal], Vol. 8, p 16 1954.

KRASIL'NIKOV, N.

"The formation of ruses in *Saccharomyces cervisiae*," Izv. AN SSSR, 11, p 335, 1934.

COMMON ELEMENTS										COMMON VARIABLE NOTES									
COMMON ELEMENTS										COMMON VARIABLE NOTES									
<p><i>10X</i></p> <p>Determination of silica in aluminum fluoride and cryolite. A. A. Borokovskii and N. A. Krasnitsnikov. <i>Zashchitaya Lab.</i> 4, 1172-4(1935); cf. C. A. 20, 1740⁹.—In the detn. of SiO_2 in AlF_3 and cryolite by the Nikolaev and Koluigin method (C. A. 20, 5005⁹), the repeated evapn. of the melt with concd. HCl results in an incomplete expulsion of F and a partial loss of SiO_2 as SiF_4 formed with the F retained in the soln. before filtration. By substituting H_2SO_4 for HCl and avoiding excessive diln. of the soln. the results are considerably improved. Heat an intimate mixt. of 0.5 g. of powd. sample and 3 g. $\text{Na}_2\text{B}_4\text{O}_7$ in a Pt crucible to a transparent glass-like mass. Dissolve the powd. mass in a Pt dish with 15 cc. of concd. H_2SO_4 dild. with 20 cc. H_2O, evap. the concd. soln. in a sand bath until it fumes strongly for 15-20 min., let cool, add 50 cc. H_2O and proceed with the filtration and detn. of SiO_2 as usual.</p> <p style="text-align: right;">Chas. Blanc</p>										<p><i>7</i></p>									
<p>ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>EXTRACTED FROM</p>									
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<p>AM</p> <p>KRASILNIKOV (N. A.), KRIS (A. E.), & LITVINOV (M. A.). Влияние корневых систем на микрофлору почвы. [The effect of the root system on the soil microflora.]—Микробиол. [Microbiol.], v. 2, pp. 270-286, 2 graphs, 1936. [English summary.]</p> <p>Investigations in the Transvolga are stated to have shown that the zone surrounding the roots (rhizosphere) [see preceding abstract] of wheat, maize, sunflower, and soy-beans is densely populated by micro-organisms, the numbers of which exceed by many millions per gm. of soil those found in the control samples. Particularly dense is the population of the soy-bean rhizosphere, that of the wheat root zone being relatively sparse and of the other two crops intermediate.</p> <p>A close correlation was observed between the vital activities of the higher plant and the quantitative composition of the soil flora, the first sharp rise in which coincides with the early stages of vegetation and the second with the fruiting period. Microbiological activity increases at the optimum soil moisture content, declining noticeably immediately after the watering of the plots and then rising to a maximum.</p>			
ASD-31A METALLURGICAL LITERATURE CLASSIFICATION			
SUBJECT INDEX		CLASSIFICATION	
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11C

Microbiology

Mycobacteria. N. A. Krasilnikov. (U. S. B. R.) 6, 1218-28(1937); Chem. Zentr. 1938, II, 704. Mycobacteria are nonmotile, Gram-pos. and slightly acid-fast. They can be grown on almost all nutrient media. The fermentive power of all red, orange or rose-colored strains is weak; that of the yellow-green organisms is strong. W. A. Moore

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

KRASIL'NIKOV, N. A.

"Ray Fungi and Related Organisms "etinomycetales," Moscow-Leningrad, 1938

KRASIL'NIKOV, N. A.

KRASIL'NIKOV, N. A. and TAUSON, T. A. "Variability of Pro-actinomycetes and Myxobacteria,"
Mikrobiologiya, vol. 7, no. 1, 1938, pp. 50-74. 448.3 M582

SO: SIRA SI - 19-53, 15 December 1953

CA

11C

The bactericidal action of sea water. N. A. Krasil'nikov. *Microbiology* (U. S. S. R.) 7, 329-33 (1948).
Chem. Zentr. 1940, I, 3270-81.—Sea water possesses a bactericidal factor which is destroyed by boiling. Soil bacteria are more sensitive to this factor than the bacteria present in sea water.
M. G. Moore

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SOURCE SYMBOLS
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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

100 AND 4TH ORDERS

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//C

The sensitivity of the Actinomycetales to radon. N. A. Krasil'nikov. *Microbiology* (U. S. S. R.) 7, 721-31 (1938); *Chem. Zentr.* 1939, II, 1292-3.—Great differences exist between protoactinomycetes, mycobacteria and myxobacteria as regards their sensitivity to Rn. Large differences exist between the individual strains of the same species. All red, yellow and yellow-green pigmented strains (*Proct. ruber*, *cutreus*, *Mycob. tuberculosis*, and others) are more sensitive to Rn. Rn was found to stimulate the growth of *Proct. ruber* and *Mycob. tuberculosis* but not that of *Proct. album* and *Mycob. album*. W. A. Moore

ASB-11-A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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PROCEDURES AND PROPERTIES INDEX																							
<div style="float: left; width: 20%;">Ca</div> <div style="float: right; width: 20%;">110</div> <div style="clear: both;"></div> <p>Effect of bacteria on the growth of isolated plant roots. N. A. Krasil'nikov and N. R. Garkina. <i>Microbiology</i> (U. S. S. R.) 8, 952-7 (in English, 958) (1959); cf. C. A. 44, 8610². — The presence of bacteria depresses the growth of roots <i>in vitro</i>. Wheat roots are more sensitive to the action of <i>Azotobacter</i> than pea roots. Nodule bacteria do not fix N in cultures with isolated legume roots. The filtrates of some bacteria (<i>A. vinelandii</i>, <i>Pseudomonas</i>, etc.) stimulate root growth, but the bacteria as such do not. T. T. T. T. T.</p>																							
<div style="display: flex; justify-content: space-between;"> <div> <p>COMMON ELEMENTS</p> <p>OPEN</p> <p>MATERIALS INDEX</p> </div> <div> <p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> </div> <div> <p>ESSAYS</p> <p>ESSAYS</p> </div> </div>																							

KRASIL'NIKOV, N. A.

"The Influence of Soil Bacteria on the Growth of Wheat."

Mikrobiol, 8 No 5, 1939. Micr. Inst., Acad. Sci., Moscow, -1939-.

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Effect of microorganisms on plant growth. N. A. Krasil'nikov. *Microbiology* (U. S. S. R.) 9, 365-417 (1960). A review with 268 references. T. Laanes

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"On the Methods of the Quantitative Estimation of Nodule Bacteria in Soil."

Mikrobiol., 9, No 11, 1940. Mikrobiol. Inst., Acad. Sci. USSR, -1940-.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>AA</p> <p>КРАВИЛНИКОВ (N. A.). Определитель лучистых грибов. <i>Actinomycetales</i>. (Classification of ray fungi. Actinomycetales.)—148 pp., 49 figs., Moscow-Leningrad, Acad. Sci. U.S.S.R., 1941. Roubles 9-50. [Received February, 1944.]</p> <p>In an attempt to classify the Actinomycetales found, mainly in soil, in the U.S.S.R., on the basis of morphological characters, especially of the spores and sporophores, some general rules are laid down for the cultural studies of Actinomycetales. This monograph, which includes several new species [with diagnoses in Russian only] and new combinations, provides keys in Russian for the identification of species, and annotated descriptions of genera and species. The author recognizes two families: Actinomycetaceae [cf. <i>R.A.M.</i>, xxiii, p. 150], comprising 44 species and 3 subspecies of <i>Actinomyces</i>, 33 of <i>Practinomyces</i>, 33 of <i>Mycobacterium</i>, and 10 of <i>Mycococcus</i>; and Micromonosporaceae, consisting of the single genus, <i>Micromonospora</i>, with 9 species. There is a bibliography of 263 titles.</p>																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

[illegible]

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"Phytohormonal Activity of Soil Bacteria."

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"The Individual Variability of Microorganisms," Zhur. Obshch. Biol., No 4,
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The Effect of Medicinal Preparations on the Wounds Microflora"

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Influence of soil bacteria on the virulence and activity of *Rhizobium*. N. A. Krasil'nikov and A. I. Korenyak. *Microbiology* (U.S.S.R.) 13, 39-44 (in English, 44) (1944). Tests with clover, alfalfa, lupine, and bean seeds, inoculated with *R. trifolii* (I), showed that certain strains of *Pseudomonas* and *Achromobacter*, when present in topsoil, will activate the development of I in the root system, while other strains will inhibit it, or have no effect at all. The activating bacteria, when mixed with I, increase its virulence, and induce a rapid and prolific nodule formation. Weakly virulent strains of I become highly virulent. The yield is significantly higher than could be obtained with pure cultures of I. This occurs also in the absence of I but the yield is somewhat lower than in the presence of I. T. Laanes

Ent. Microb. 15
Hered Sci USSR

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"The Bacterial Mass of the Rhizosphere of Plants."

Mikrobiol., 13, No 4, 1944/